

V&V Reference Report

L2 ASCDS Version : 10.7

Observation 21786 - L2 Version 1
Chandra X-Ray Center

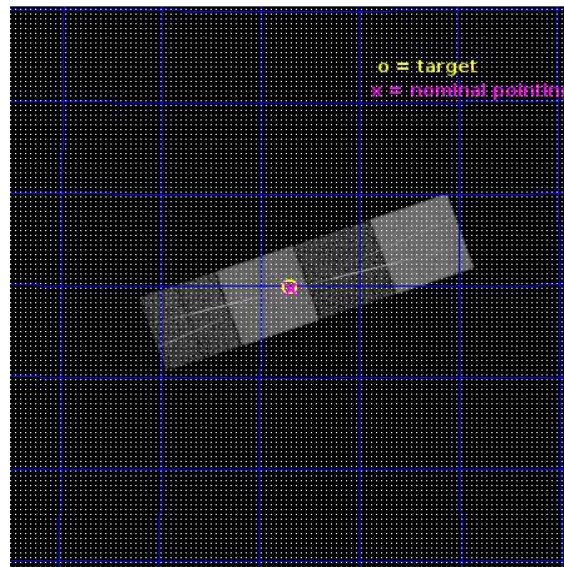
L2 Processing Date : Dec 6 2018

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1 Front

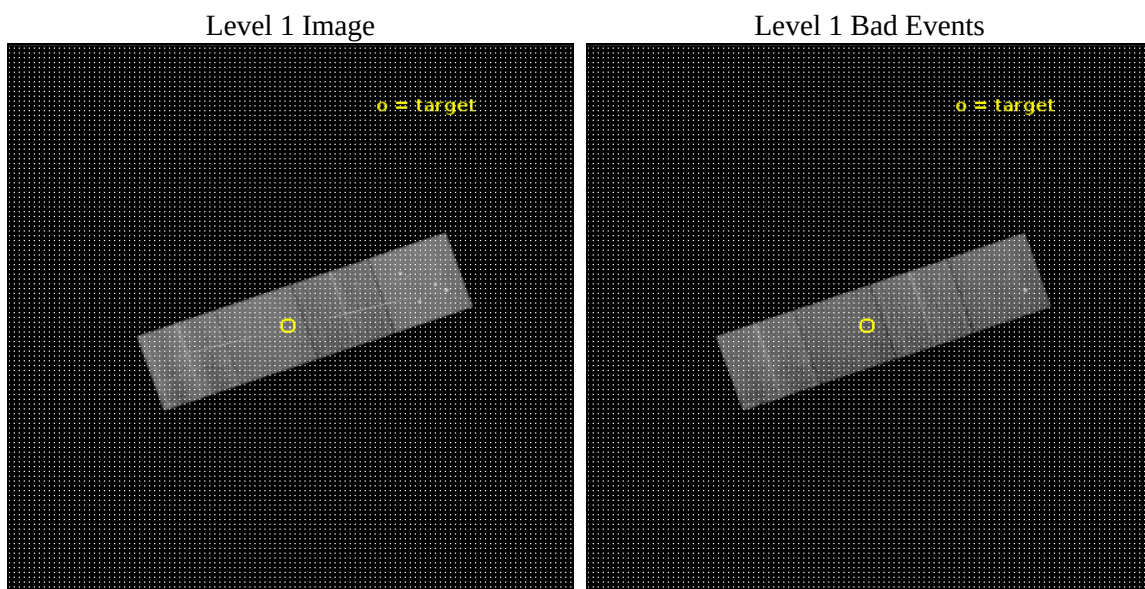
seq_num	291472	Sequence number
obs_id	21786	Observation id
title	AO-20 Calibration Observations of Capella	Proposal title
observer	CXC Calibration	Principal investigator
object	Capella	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	79.17625	Observer's specified target RA [deg]
dec_targ	45.997889	Observer's specified target Dec [deg]
ra_nom	79.171542204655	Nominal RA [deg]
dec_nom	45.995162921248	Nominal Dec [deg]
roll_nom	160.65996521173	Nominal Roll [deg]
revision	1	Processing version of data
ontime	18060.600139022	Sum of GTIs [s]
livetime	17824.625102185	Livetime [s]
ontime5	18060.600139022	Sum of GTIs [s]
ontime6	18060.600139022	Sum of GTIs [s]
ontime7	18060.600139022	Sum of GTIs [s]
ontime8	18060.600139022	Sum of GTIs [s]
l2events	230358	Number of level 2 events



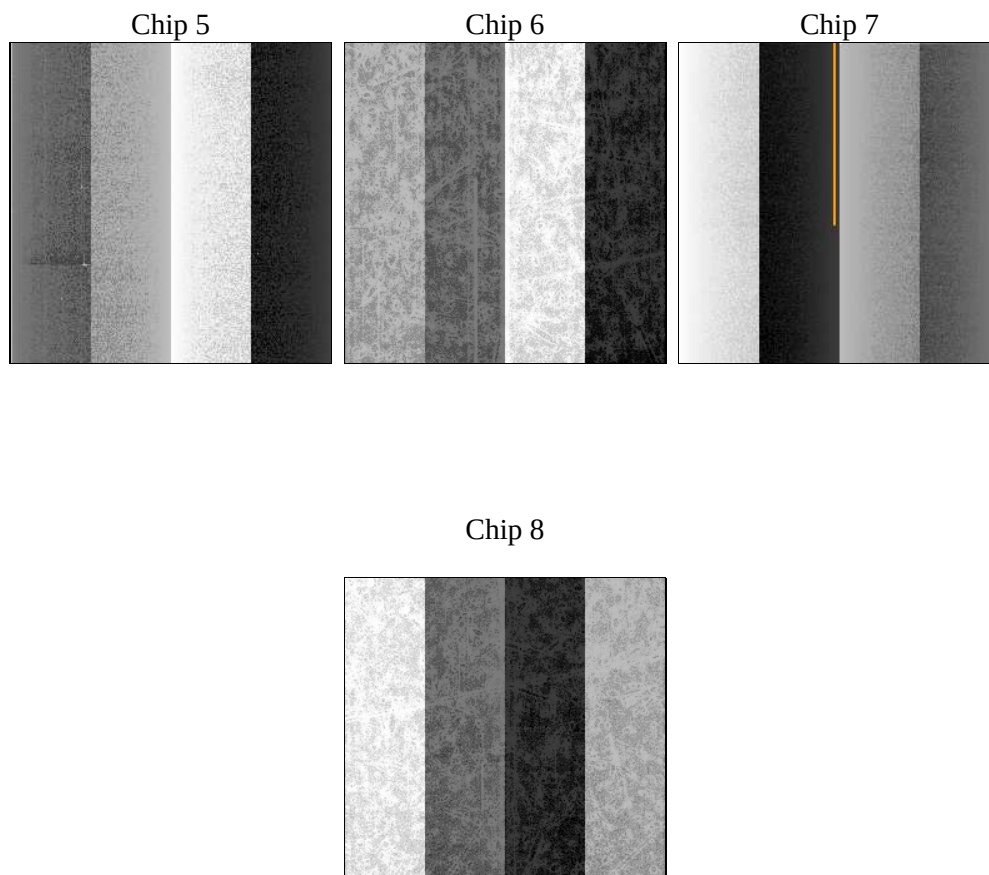
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	10.7	Processing system revision	ontime	18060.600139022	Sum of GTIs [s]
caldsver	4.8.0.1	 	ontime5	18060.600139022	Sum of GTIs [s]
date	2018-12-07T00:56:35	Date and time of file creation	ontime6	18060.600139022	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	18060.600139022	Sum of GTIs [s]
			ontime8	18060.600139022	Sum of GTIs [s]
			l1events	759560	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4090.38, 4100.12)	src1a sky pixel position
			zo_pos_tgd	(4090.49, 4100.30)	src1a sky pixel position via radetect

2.1.4 Events

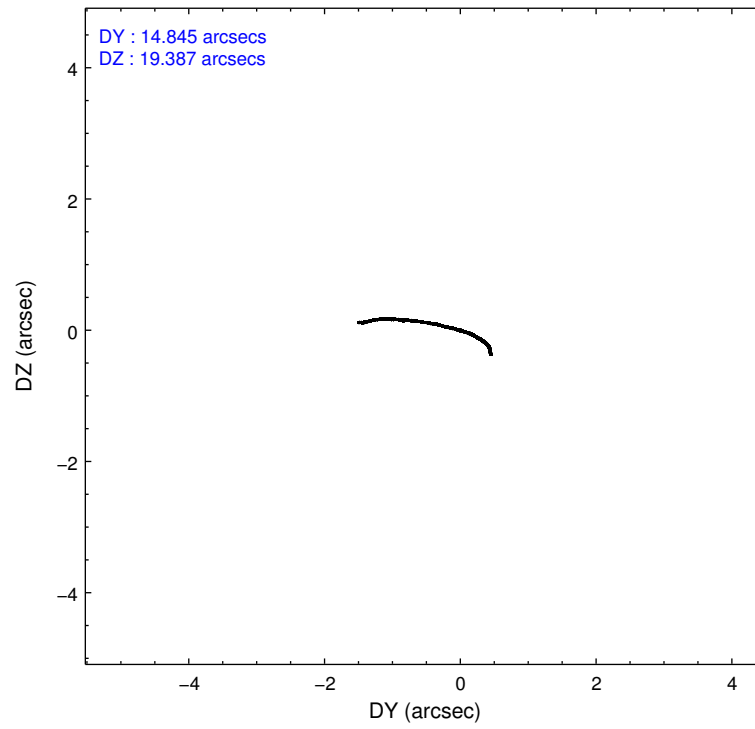
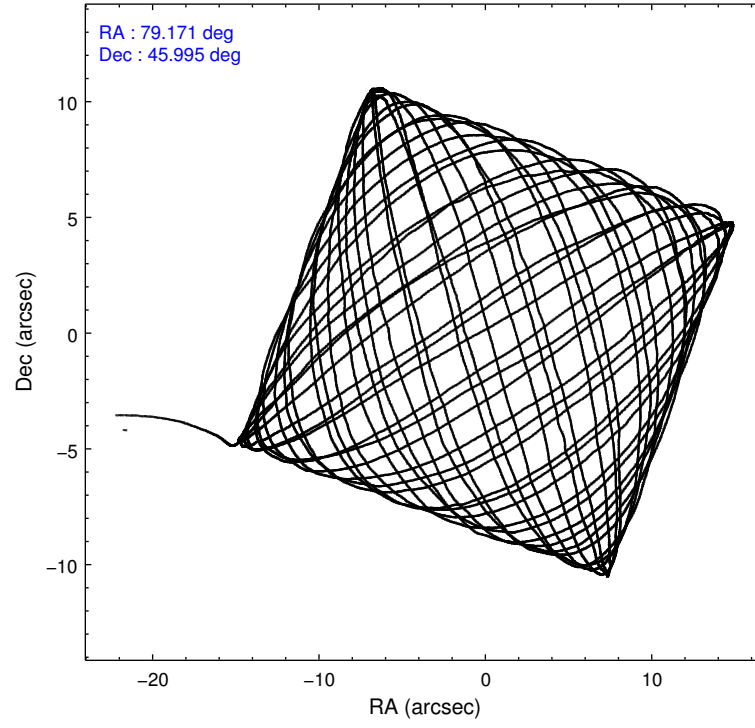
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	236675	145440	188770	188675
rejected events	117620	123355	102267	132992
rejected %	49%	84%	54%	70%

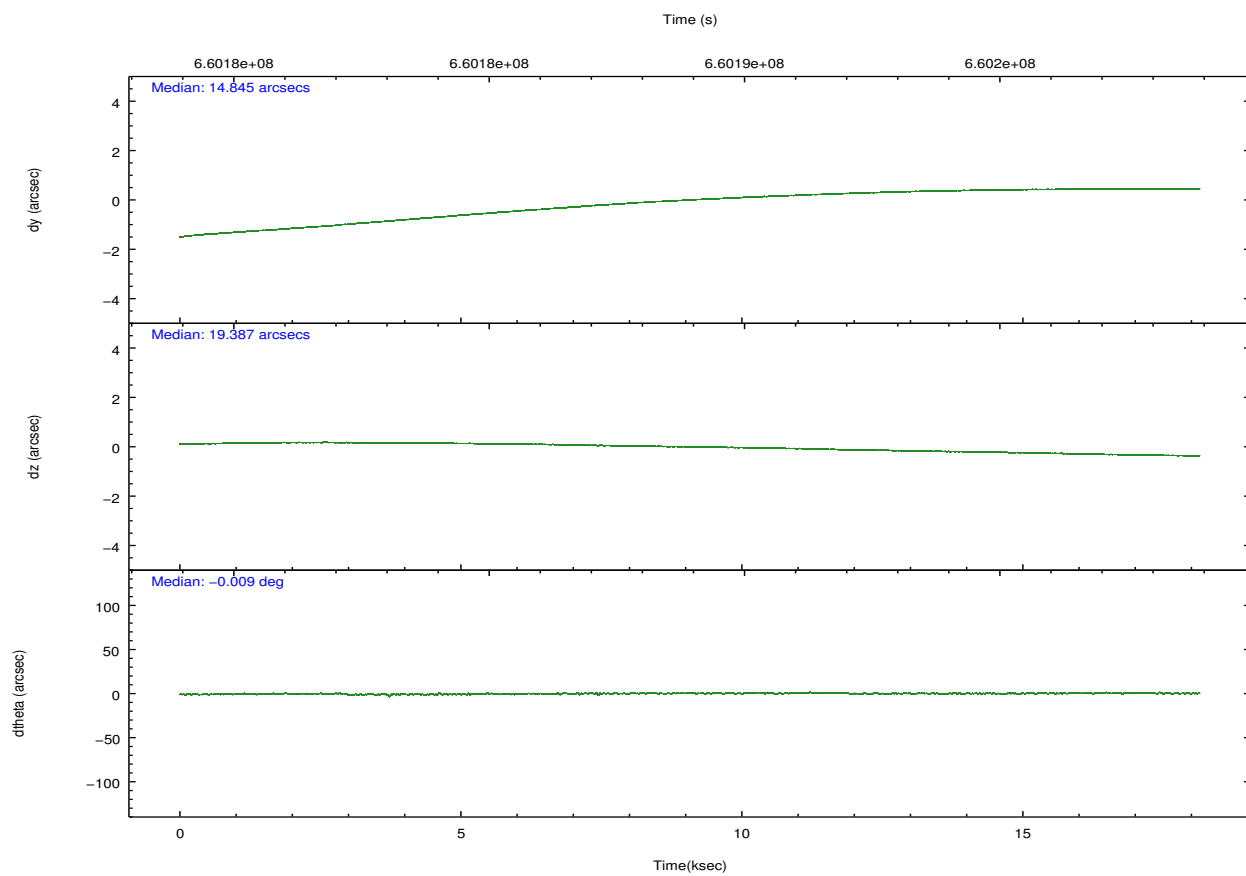
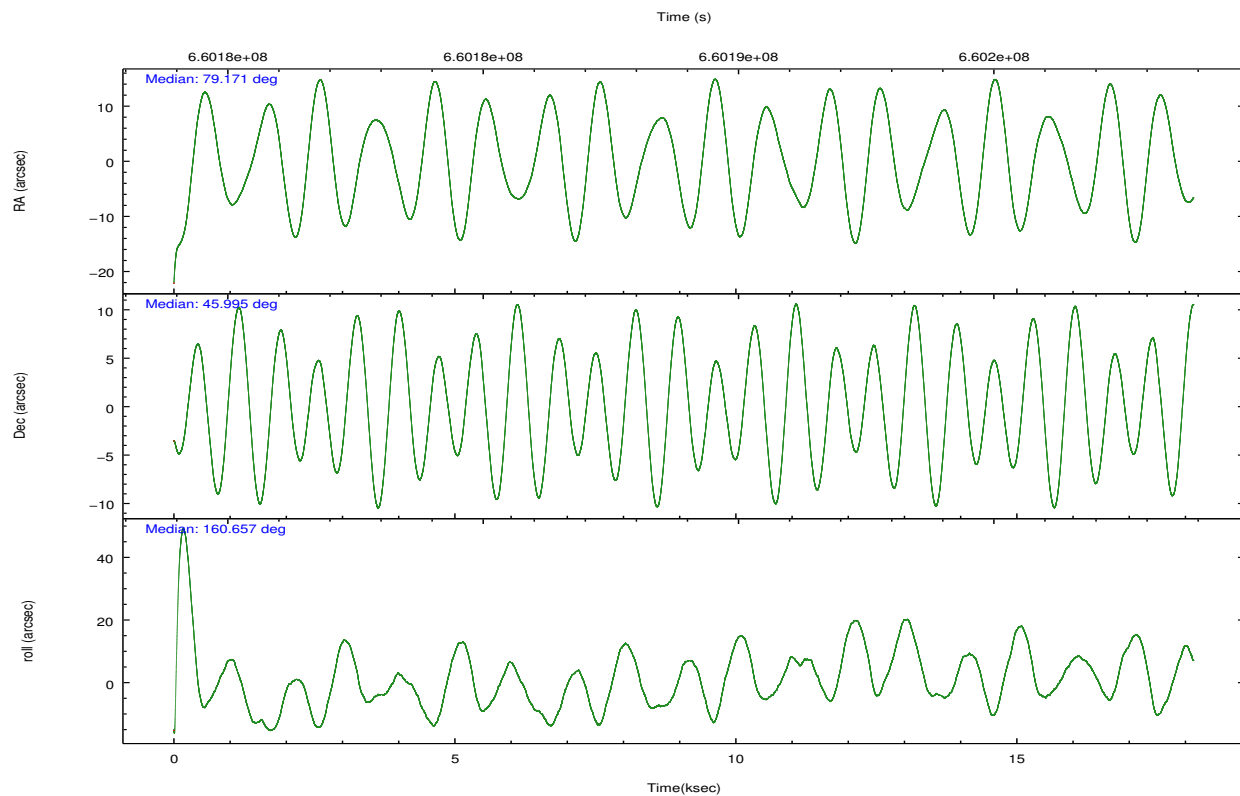
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	16144	10440	8800	18307
	6%	7%	4%	9%
grade 1 events	527	87	475	191
	0%	0%	0%	0%
grade 2 events	36837	4293	18896	13110
	15%	2%	10%	6%
grade 3 events	3745	1713	7269	5332
	1%	1%	3%	2%
grade 4 events	3321	1796	7007	4982
	1%	1%	3%	2%
grade 5 events	15705	6447	18511	9910
	6%	4%	9%	5%
grade 6 events	59045	3849	44559	13978
	24%	2%	23%	7%
grade 7 events	101351	116815	83253	122865
	42%	80%	44%	65%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	79.210310	79.1715422046553	CCD I2 on	N	N
[deg] Pointing Dec	46.000600	45.99516292124754	CCD I3 on	N	N
[deg] Pointing Roll	160.475500	160.659965211735	CCD S0 on	O1	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	660180007.184000	660178977.13755	CCD S5 on	O2	N
Observation start date	2018-12-02T23:18:58	2018-12-02T23:02:57	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	660198007.184000	660199478.67627	On-chip summing requested	N	N
Observation end date	2018-12-03T04:18:58	2018-12-03T04:44:38	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



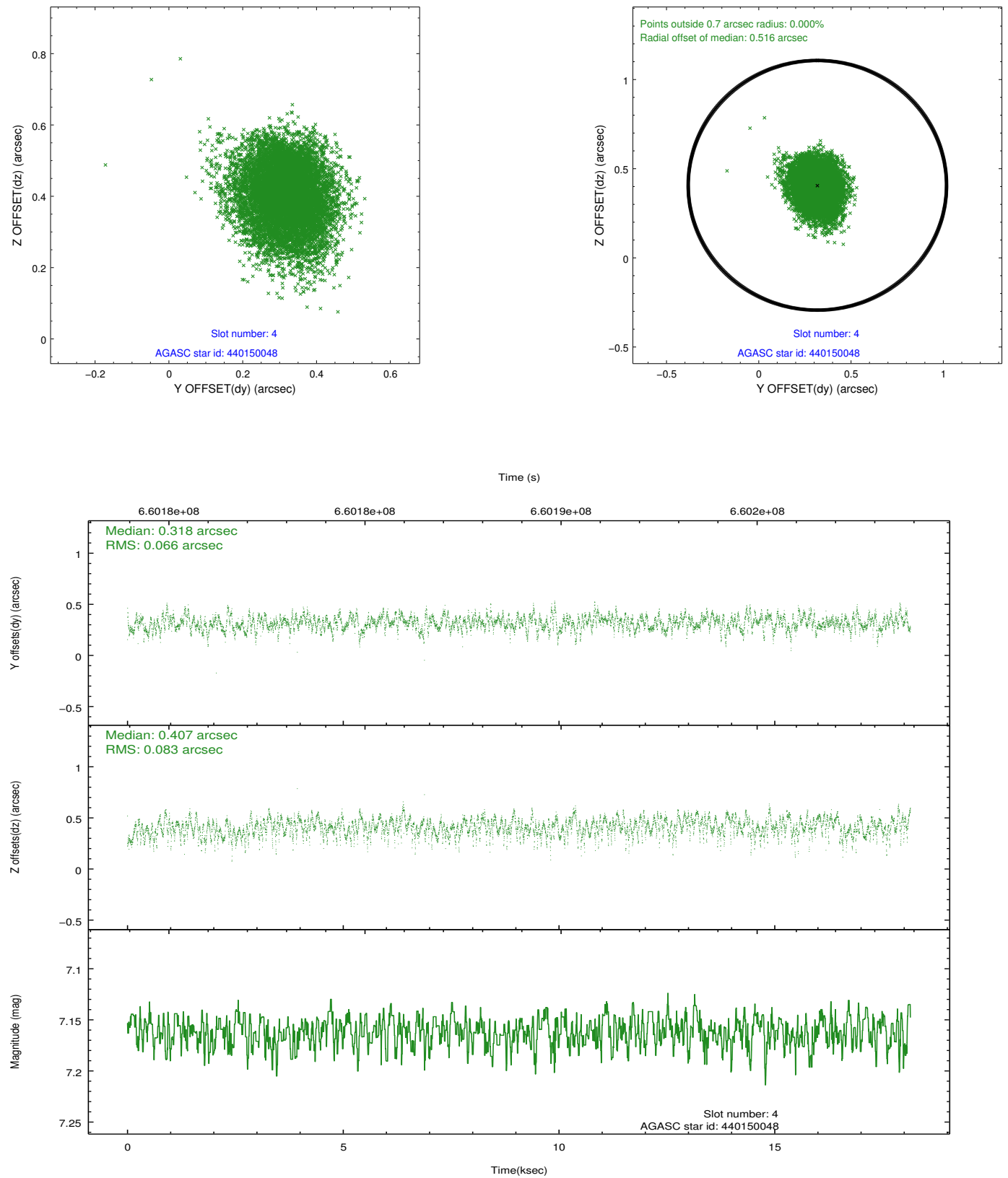


Slot Statistics

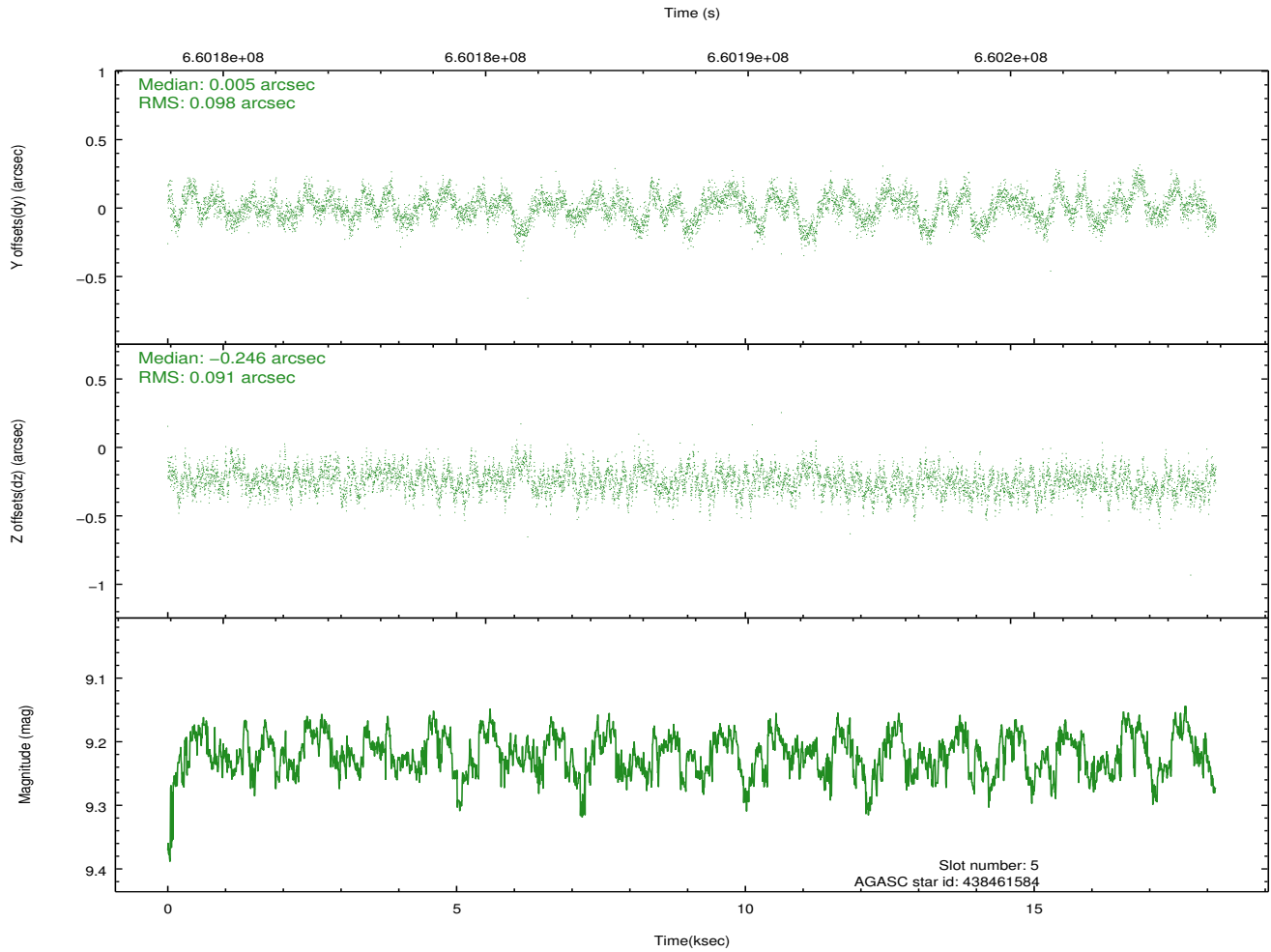
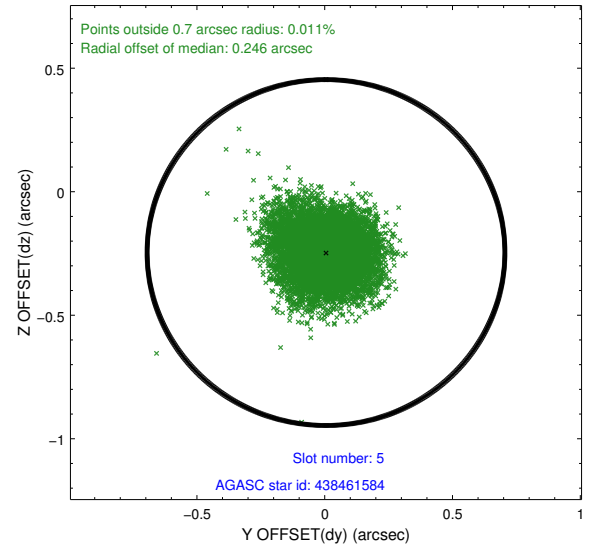
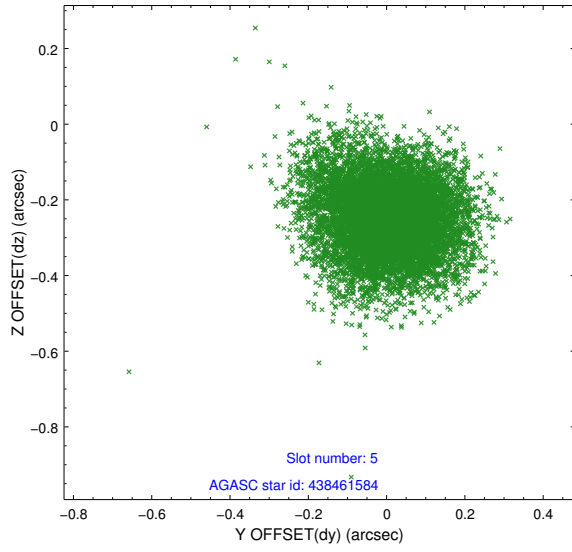
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.13	4427	1.000	0.013	-0.103	0.018	0.037	0.000000	0.000000	928.57	-1736
1	FID		ACIS-S-4	7.14	4426	1.000	0.638	0.068	0.018	0.034	0.000000	0.000000	2146.58	167
2	FID		ACIS-S-5	7.12	4426	1.000	-0.682	0.046	0.013	0.023	0.000000	0.000000	-1820.86	161
3	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
4	GUIDE	used	440150048	7.16	8849	1.000	0.318	0.407	0.113	0.181	79.112838	46.416060	727.90	-1329
5	GUIDE	used	438461584	9.22	8837	1.000	0.005	-0.246	0.142	0.232	78.061532	45.583834	2233.08	2361
6	GUIDE	used	438460832	8.94	8845	1.000	-0.337	-0.331	0.179	0.266	78.414614	45.554782	1356.56	2173
7	GUIDE	used	440149480	9.18	8832	1.000	-0.003	0.172	0.193	0.324	79.794341	45.220426	-2333.14	2146

2.4 Star Slots

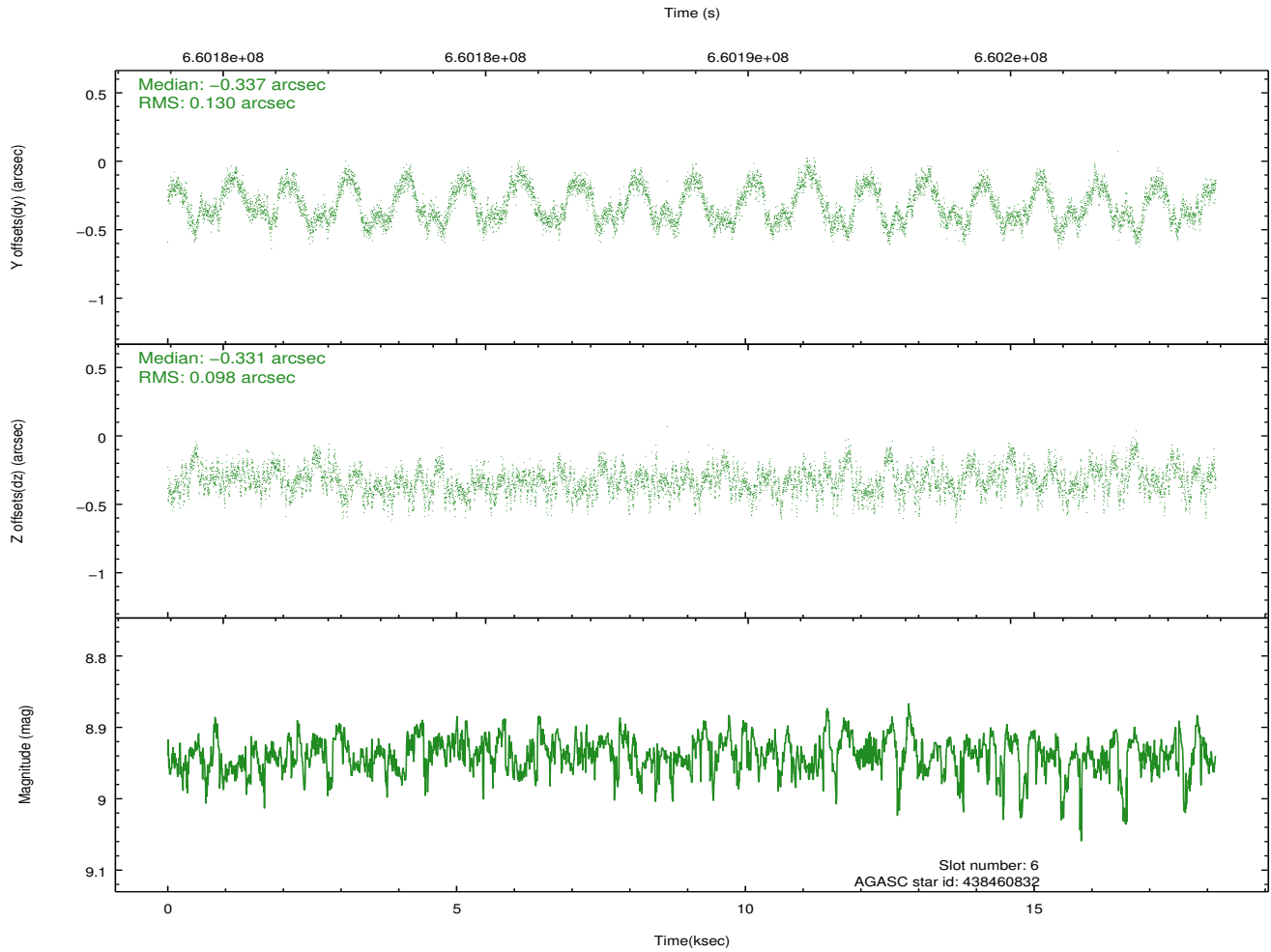
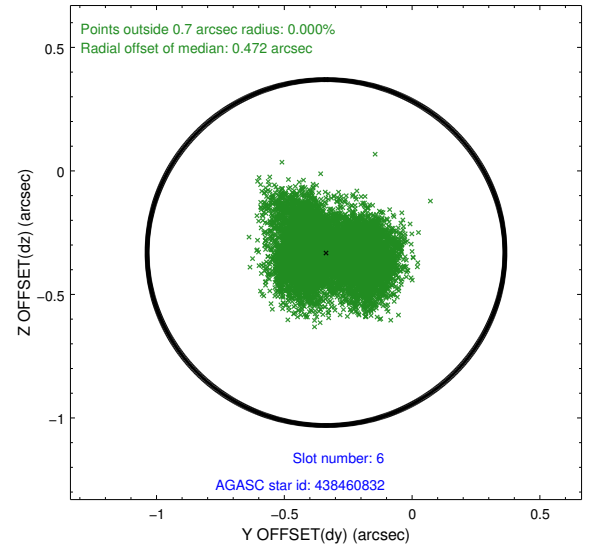
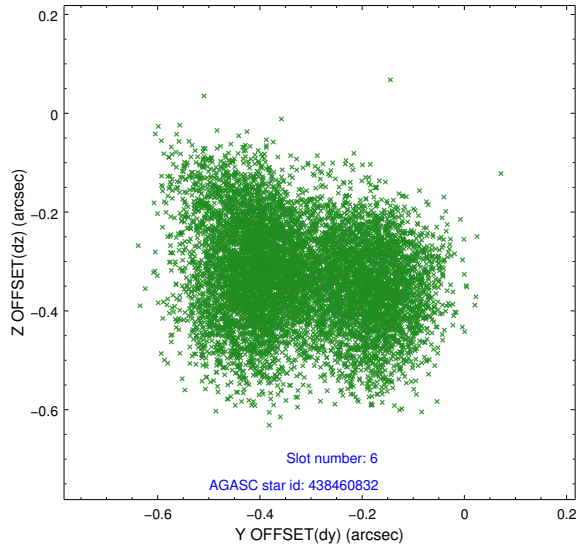
2.4.1 Slot 4



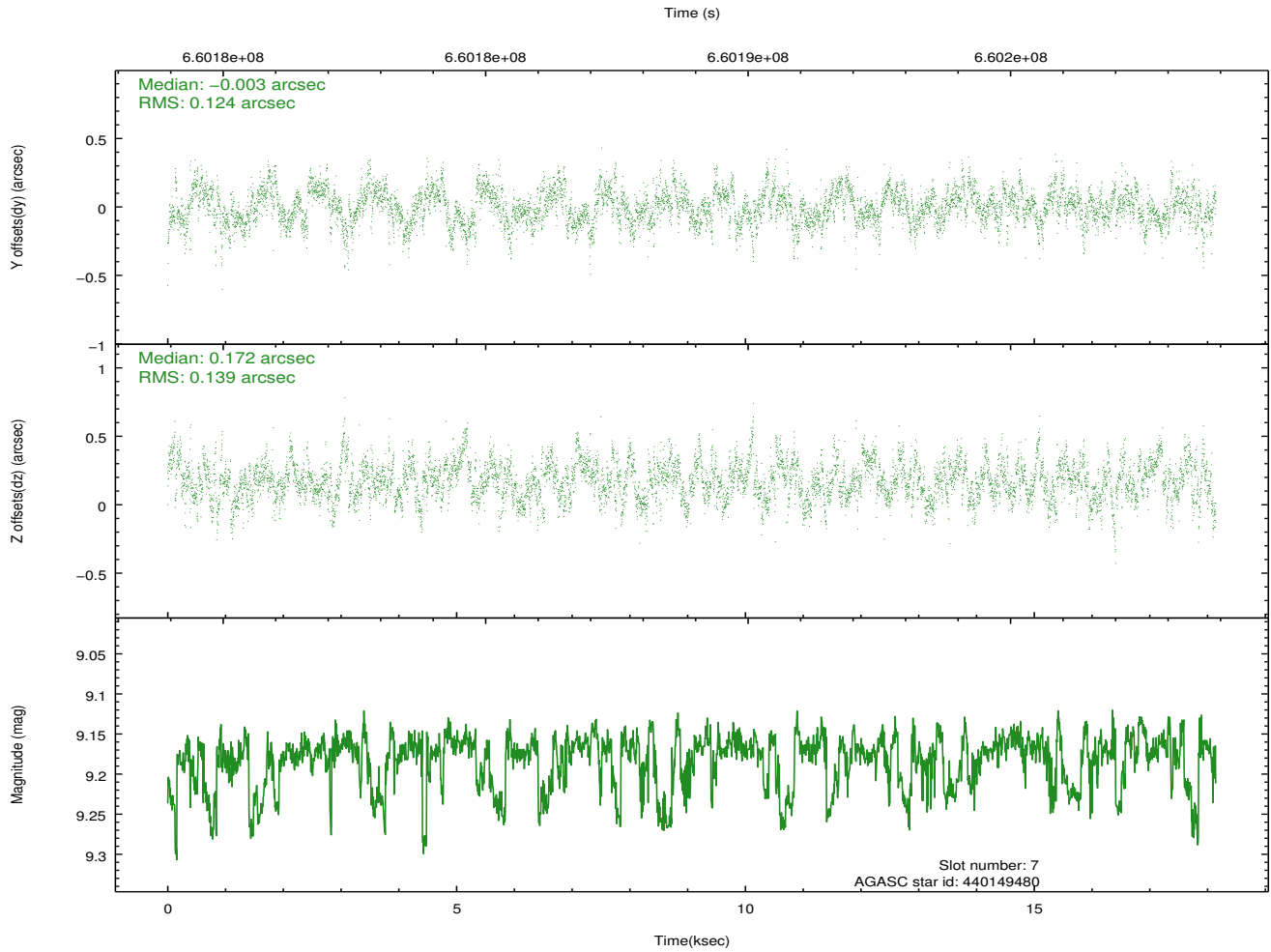
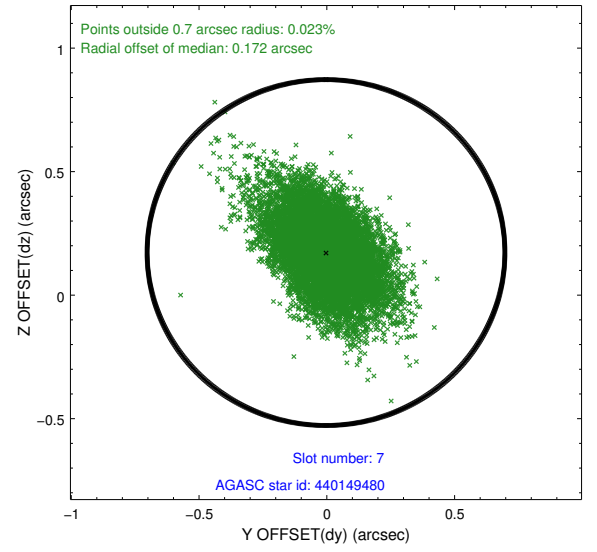
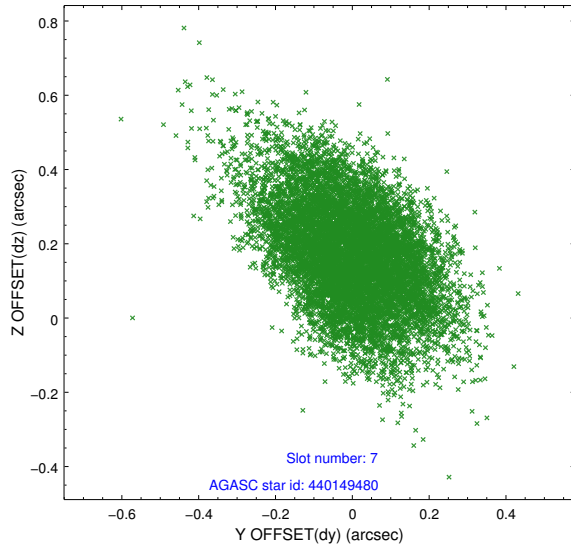
2.4.2 Slot 5



2.4.3 Slot 6

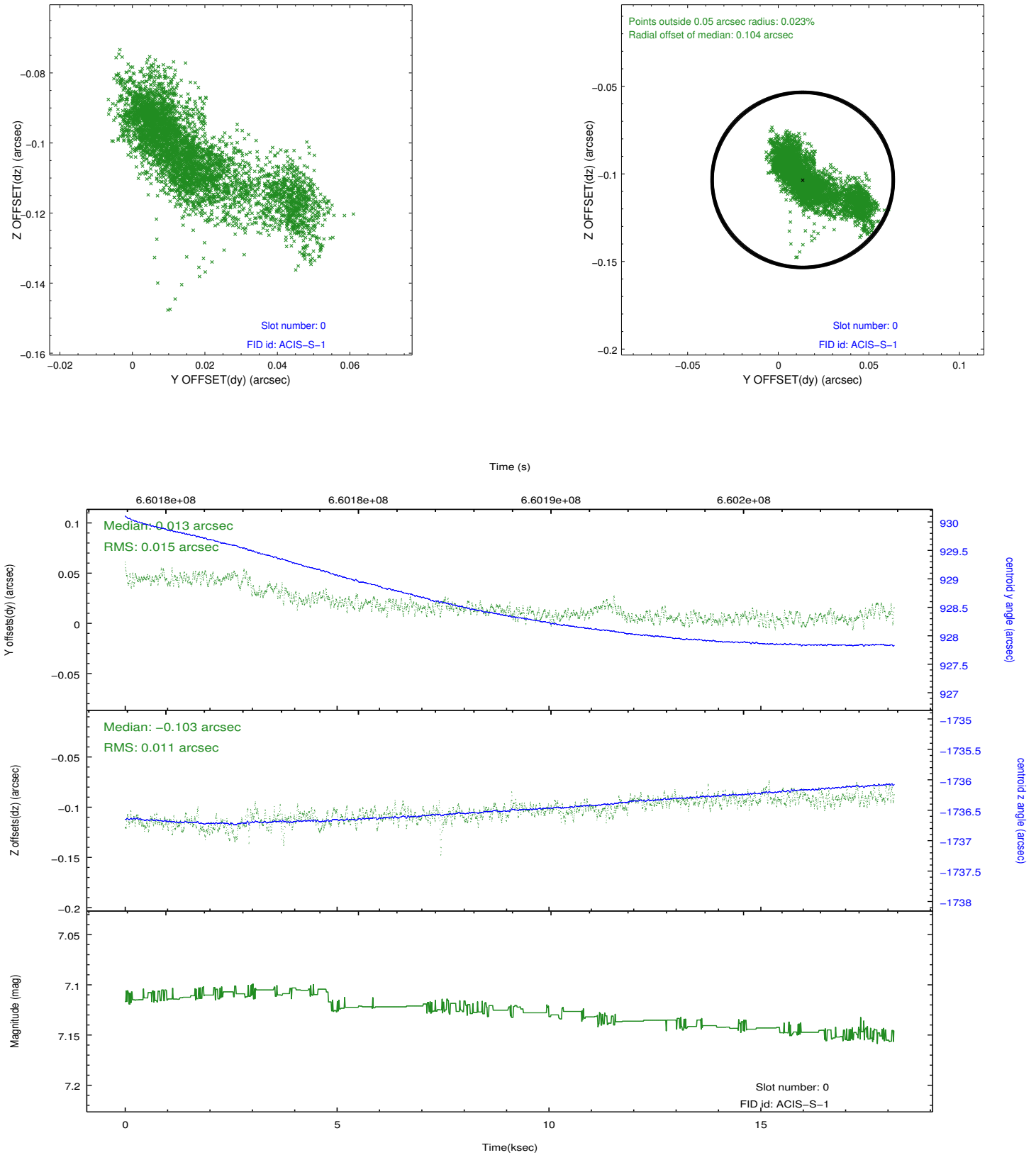


2.4.4 Slot 7

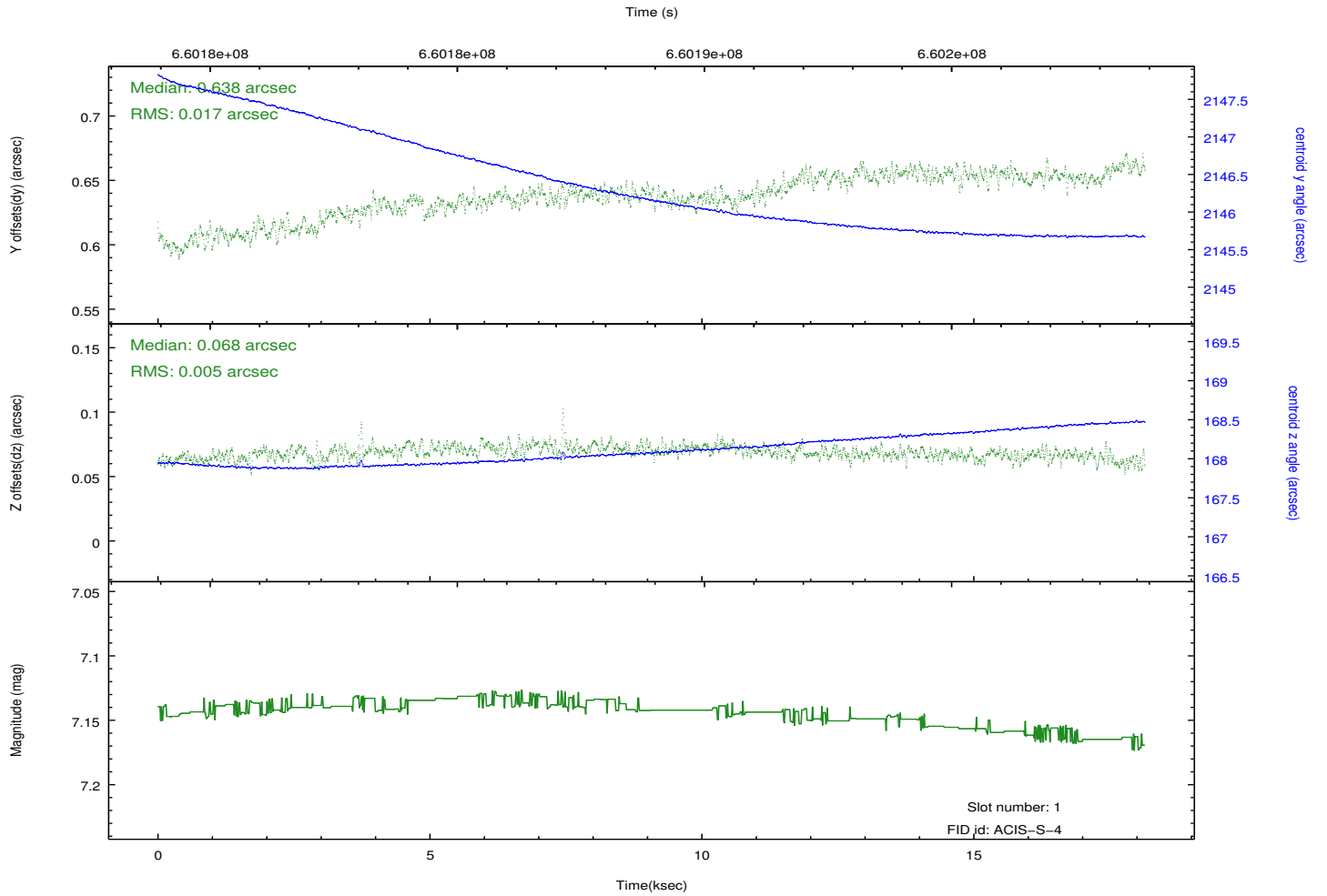
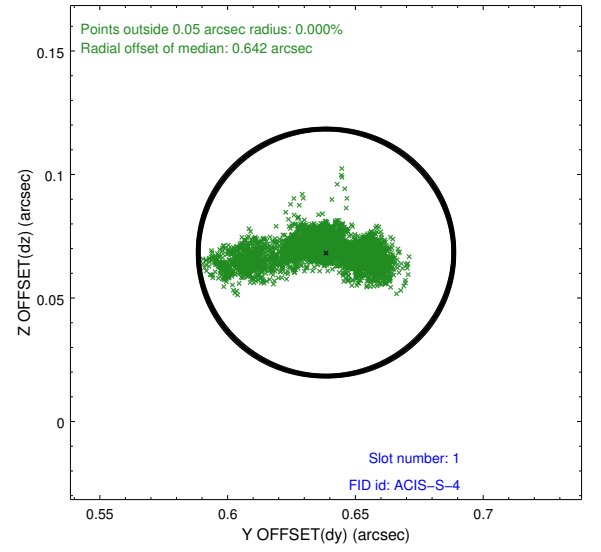
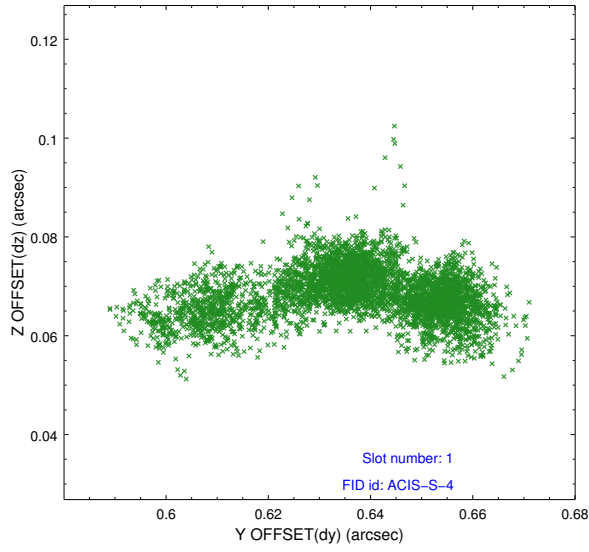


2.5 FID Slots

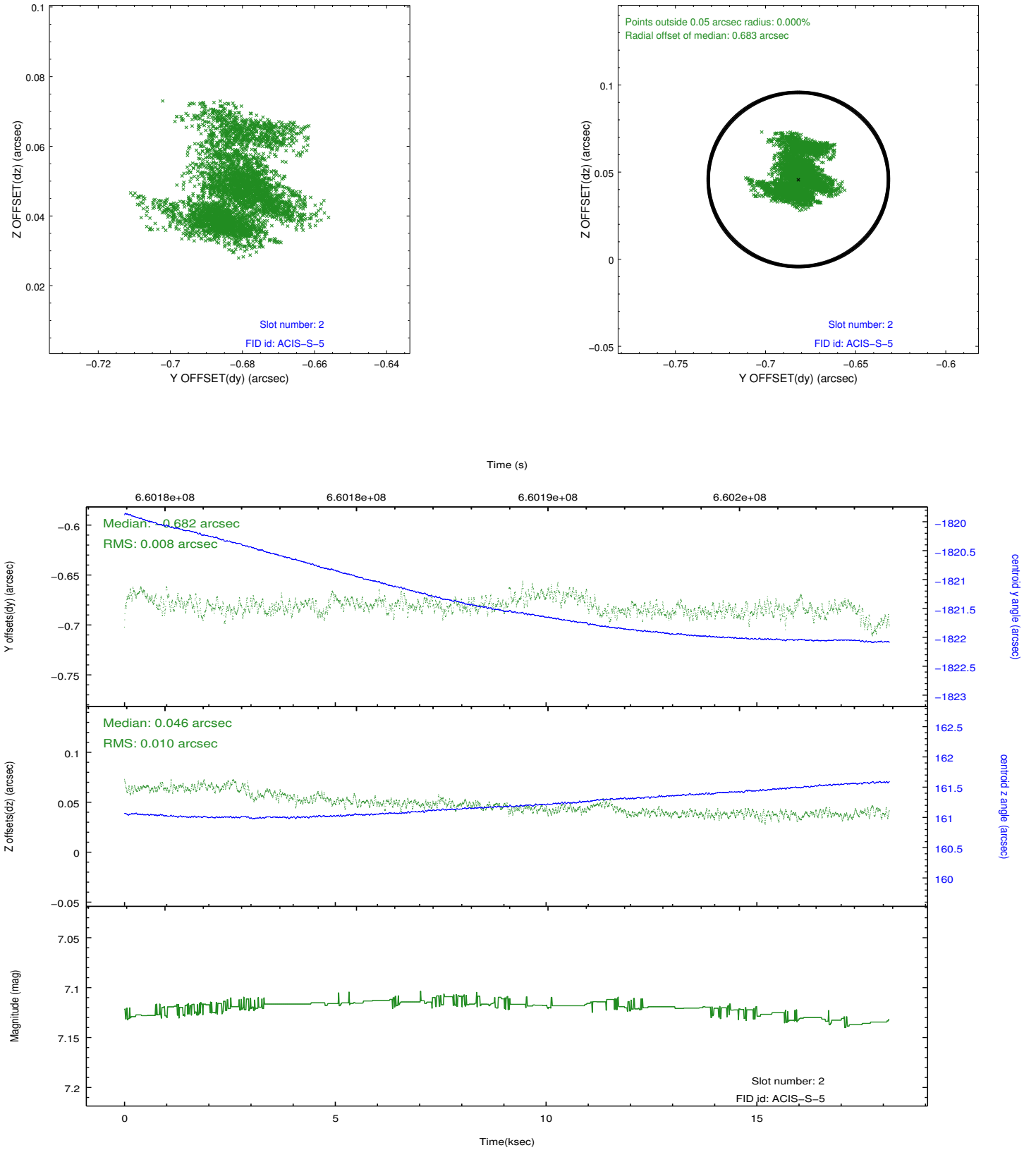
2.5.1 Slot 0



2.5.2 Slot 1

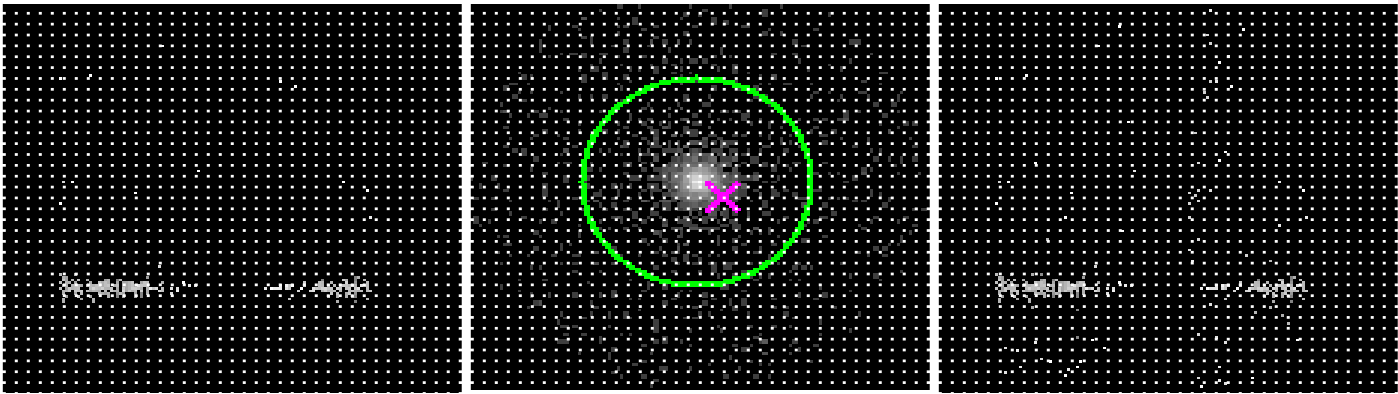


2.5.3 Slot 2



3 Gratings

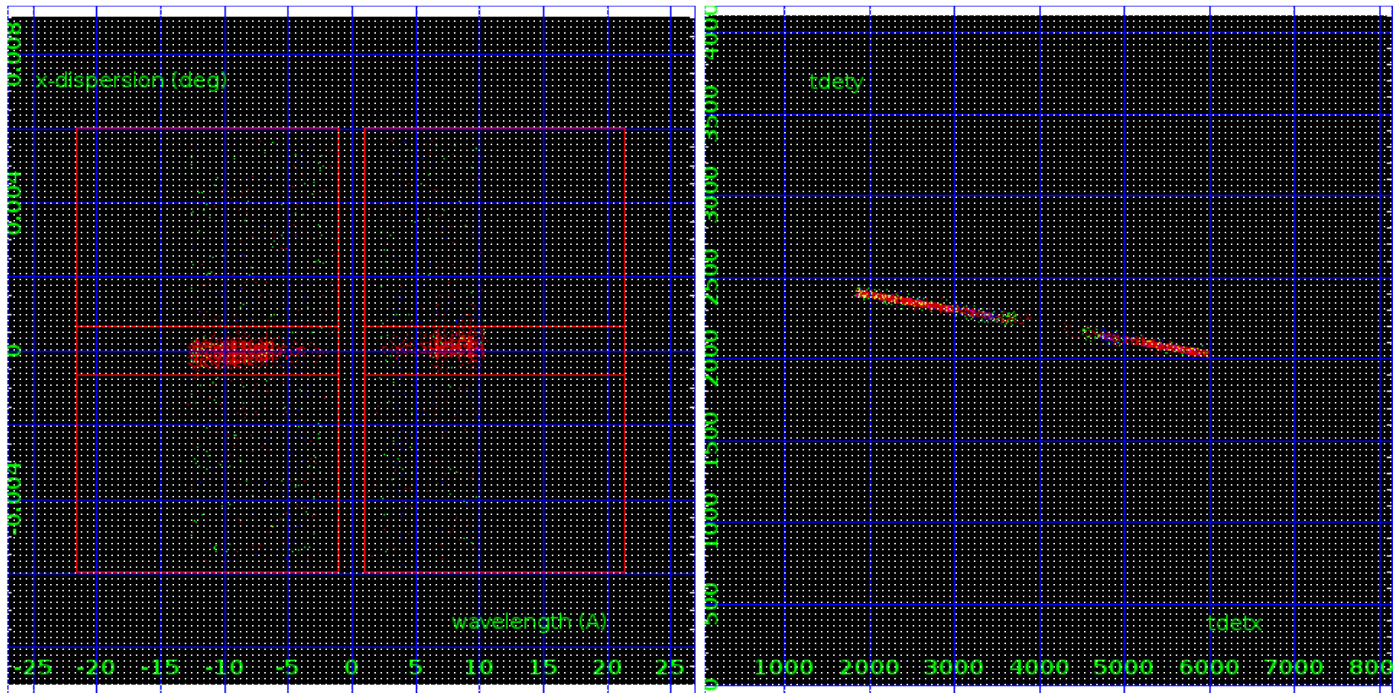
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

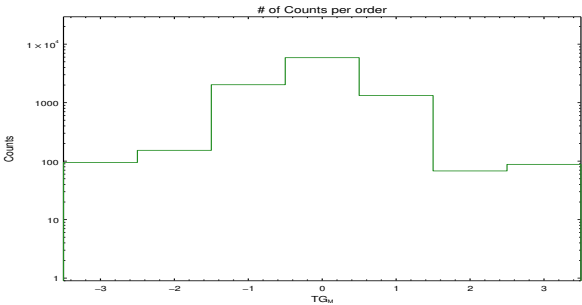
HEG Order Sort ALL

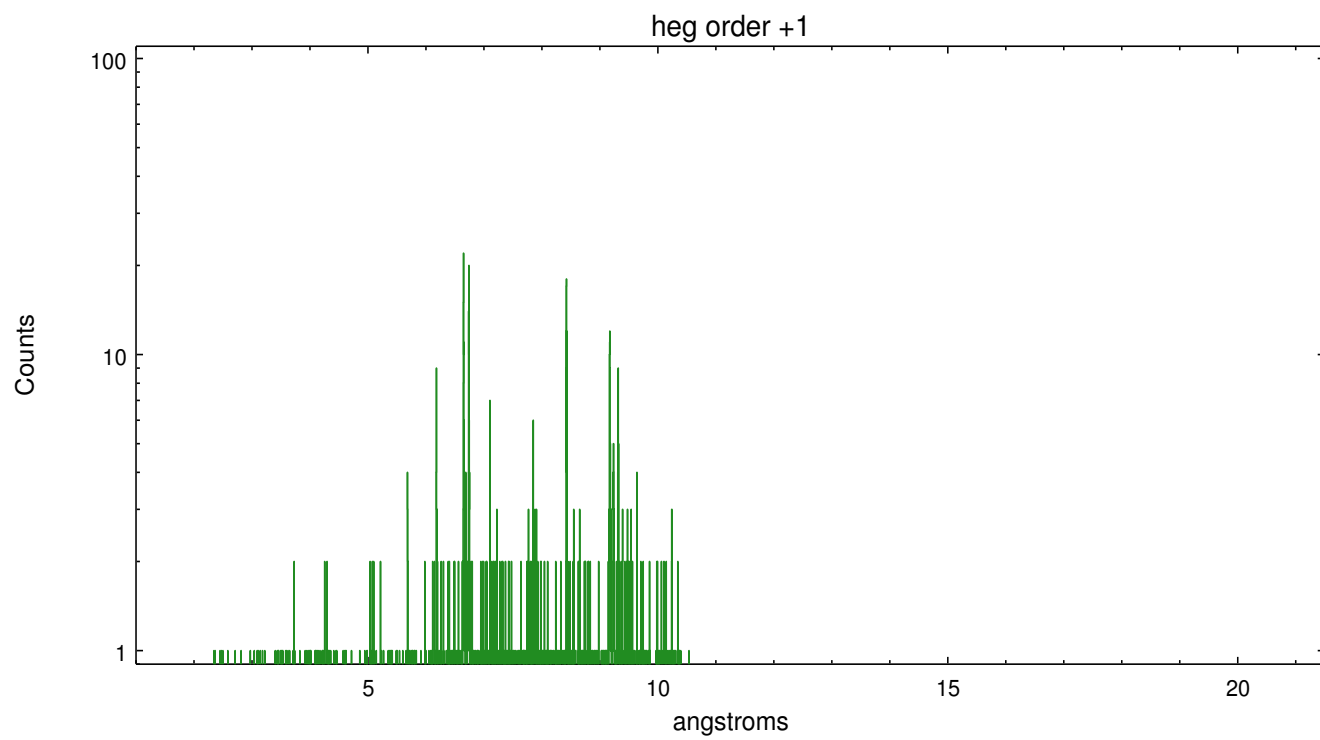
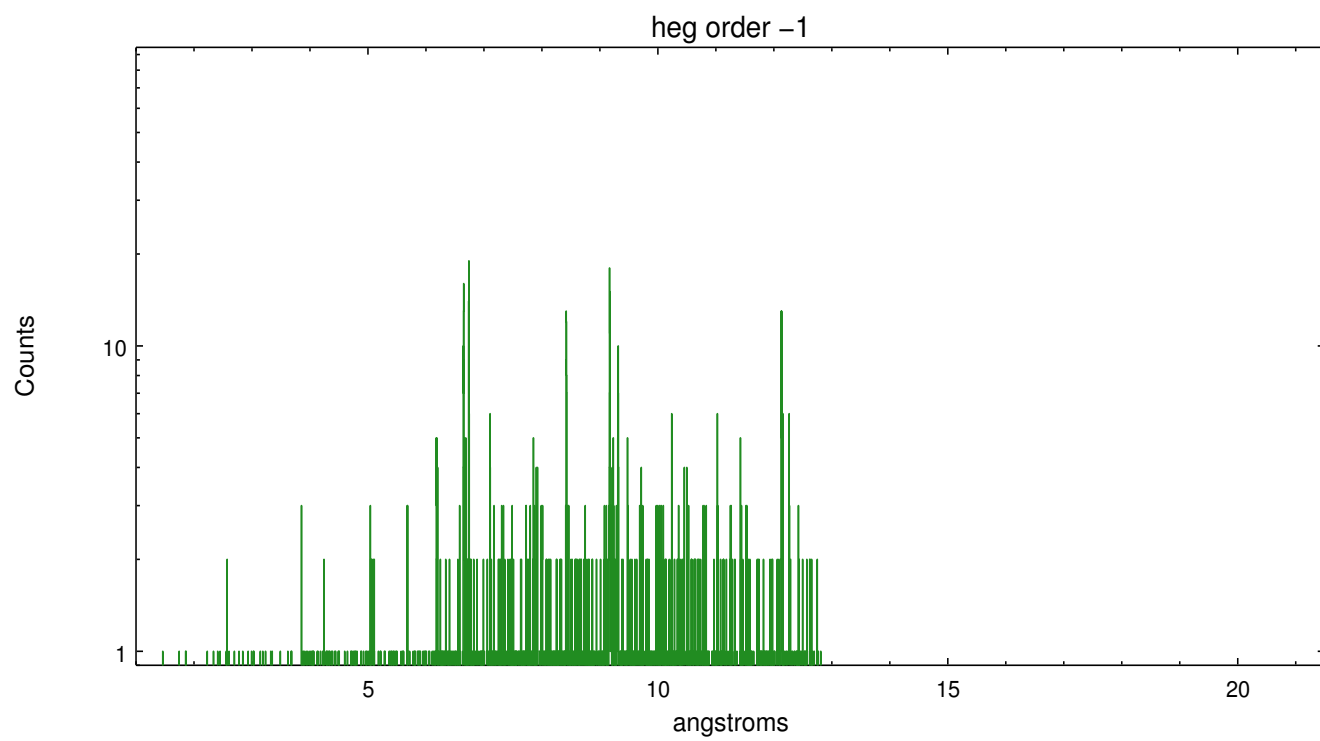


Spot Image HEG

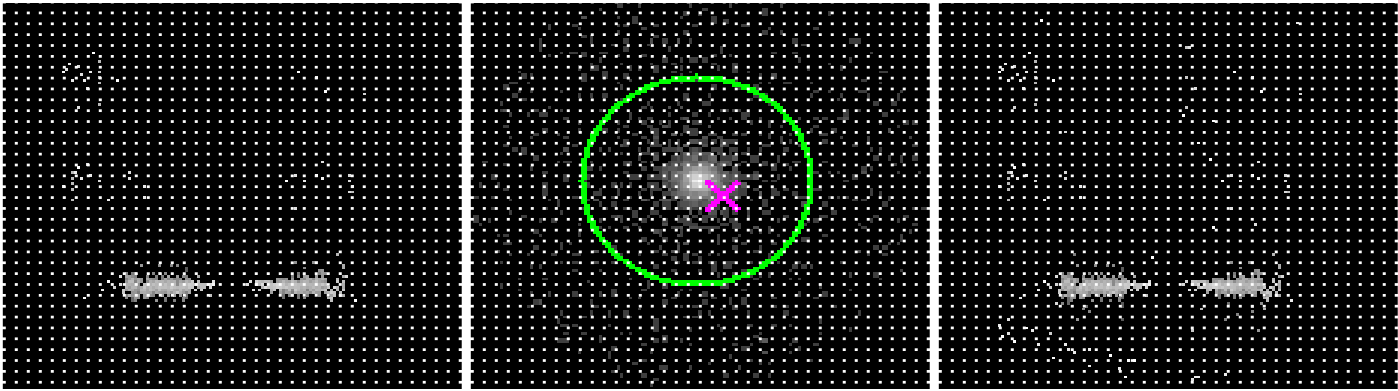
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	95	153	2026	5877	1323	68	88





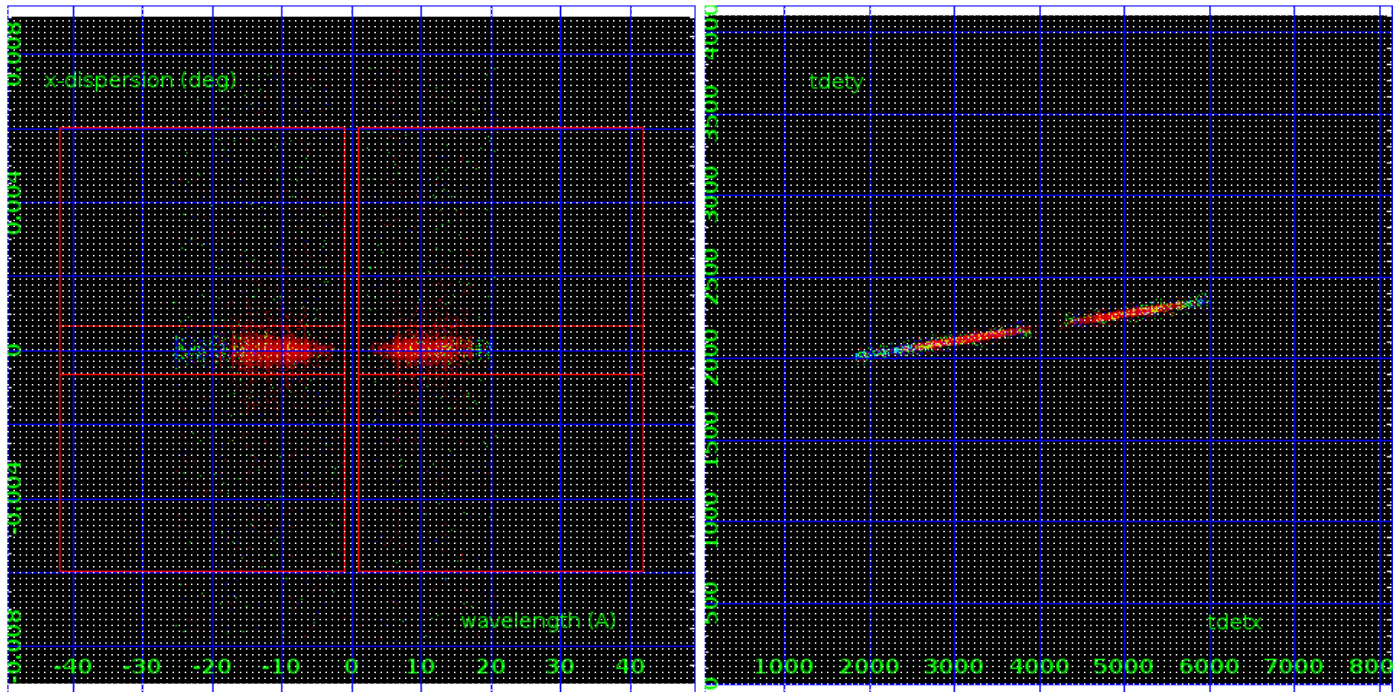
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

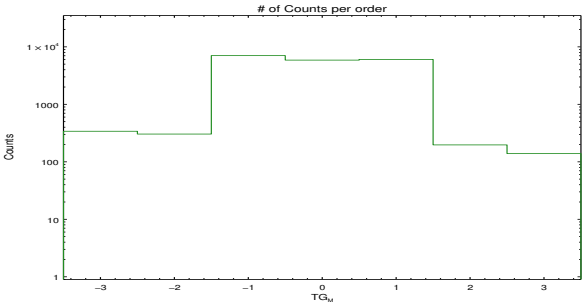
MEG Order Sort ALL

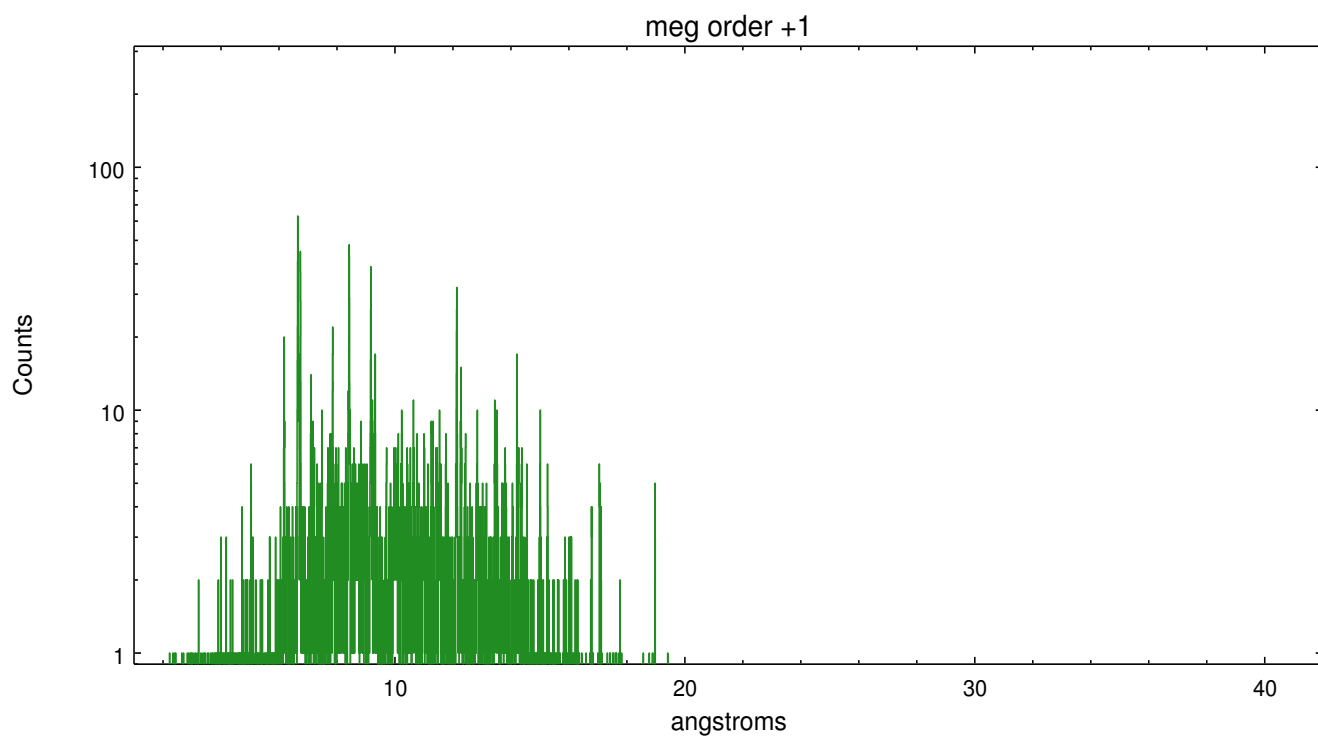
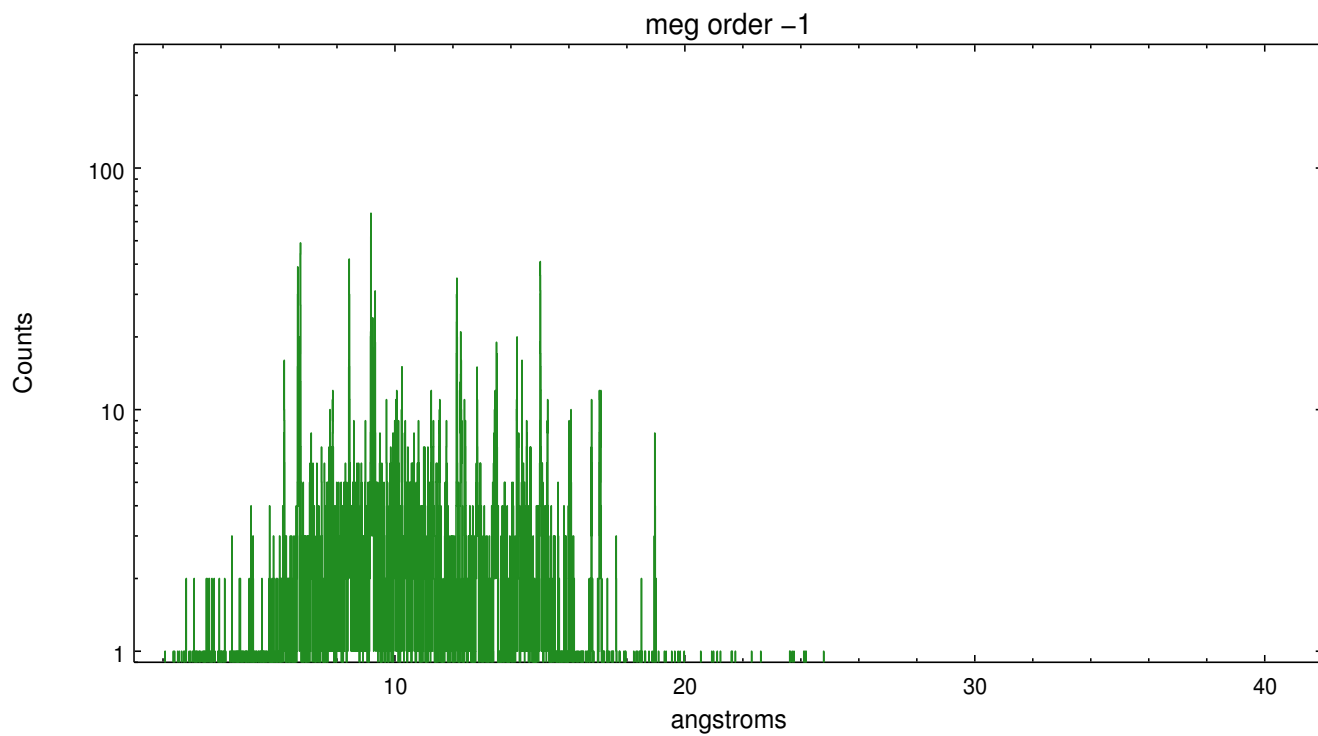


Spot Image MEG

Full Detector MEG

	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	340	304	7041	5877	6048	197	139





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2018.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.060600139022

A.2 Comments